

Sappi Europe Sustainability Report 2017



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Introduction



Staying True to Who We Are



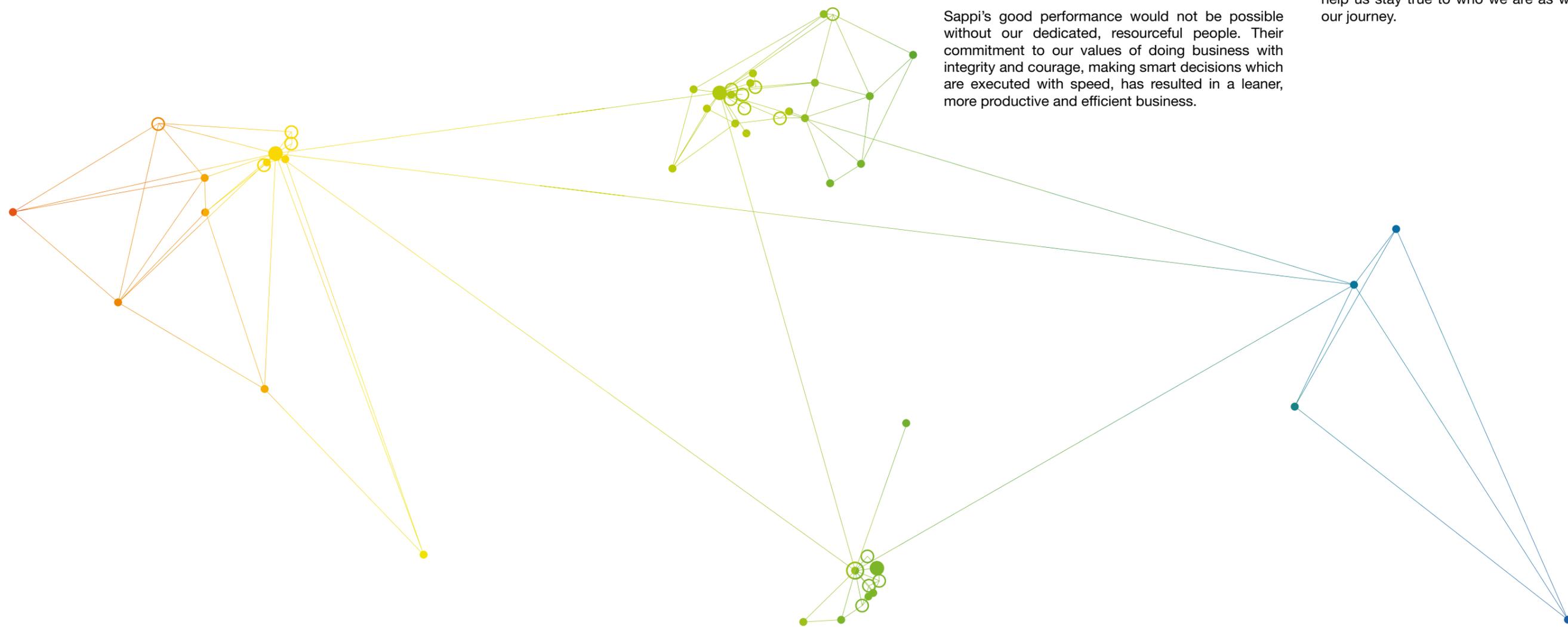
Steve Binnie
Chief Executive Officer,
Sappi Limited

Our continued strong performance confirms our ability to adapt our business to the global megatrends that are reshaping the world around us. We will continue to direct our growth and product development to meet the needs of our customers and of their customers. We are excited about the opportunities to unlock the potential of forest-based bioproducts.

In parallel, we continue to work collaboratively with technology partners and industry bodies to develop solutions which reduce our footprint while increasing our positive societal impact and deriving maximal sustainable value from natural capital.

Sappi's good performance would not be possible without our dedicated, resourceful people. Their commitment to our values of doing business with integrity and courage, making smart decisions which are executed with speed, has resulted in a leaner, more productive and efficient business.

Sappi celebrated 80 years of existence in 2016. The original company was registered on the Johannesburg Stock Exchange in January 1937. Over the years, we have built up an enviable legacy and reputation. As we continue on our One Sappi journey towards our 2020Vision, it is important to safeguard our legacy and reputation. This means ensuring that all our people, customers, partners, communities, suppliers and other stakeholders know what we stand for, how we hope to achieve our vision and understand the principles that guide us along the way. Accordingly, you will know us by what we do and our revised Code of Ethics sets out the expected behaviours that will help us stay true to who we are as we progress on our journey.



Sustainability at Sappi

Sustainable development is a necessity and starts with all of us. At Sappi Europe, we have chosen to be eco-effective, integrating the way we do business with our approach to the environment.

This means we are effective in an efficient way, reaching our goals and objectives with optimised impact. This is how we function both as people, and as a company.

Sappi's long-established approach to sustainable development imbeds the 3Ps of People, Planet and Prosperity into our business process.

People

Adding to the wellbeing, safety and health of employees and communities.

Planet

Managing our environmental impact and providing renewable and recyclable products.

Prosperity

Aiming at long-term profitability and customer satisfaction through innovation and ethical conduct.

About this Report

This report covers the period from October 2016 to the end of September 2017.

In 2017, Sappi Europe published its 2016 Sustainability KPI Factsheet (Key Performance Indicator), which provided an update in relation to environmental performance.

We are now working towards our 2020 Sustainability Targets:

- a reduction of specific CO₂ by more than 5%
- a maintained 70% target for certified fibre (of input into our products).
- a Lost Time Incident Frequency Rate of 0.52

Sappi reports on a regional and global basis. Our regional reporting structure allows a deeper regional focus that reflects local markets and aspects. Safety, health, quality and environmental data is compiled according to international best practice. Commentary is provided on graphs to enhance understanding and to indicate specific measurement criteria.

Our sustainability reports covering prior financial years are available at www.sappi.com.

Reporting Framework

Sappi Europe has been publicly reporting progress on sustainability initiatives since 2008 as part of a global sustainability report issued annually by Sappi Limited after the financial year-end. Our financial year starts on 1 October and ends on 30 September of the following year.

Since 2011, each regional division has issued its own sustainability report with consolidated global sustainability performance included in the annual report to shareholders.

Sappi Limited will also continue to publish a separate online report in conformance with the Global Reporting Initiative framework and disclosing compliance with the UN Global Compact, to which we are a signatory.

Emission figures are based on our mills in Europe unless specified otherwise. All production and non-production activities on our mill premises are included. People and Prosperity metrics are reported for the full region, including central functions, facilities and sales offices.



Sappi's global business portfolio includes:

- **PRINTING PAPERS** – used by printers, publishers and corporate end-users.
- **PACKAGING AND SPECIALITY PAPERS** – used by brand owners, converters, printers, designers and communication agencies.
- **RELEASE PAPERS** – used by suppliers to the fashion, textiles, automobile and household industries.
- **DISSOLVING WOODPULP** – used worldwide by converters to produce viscose fibre, pharmaceutical products as well as a wide range of household and consumer products.
- **BIOMATERIALS** – this part of our portfolio is dedicated to developing new products and markets from wood chemistry by exploring the micro- and nanoscale potential of woodfibre and biorefining.
- **BIO-ENERGY** – our focus here is to reduce specific purchased energy, improve the energy efficiency of our mills, increase our use of renewable energy and produce and sell surplus green electricity.

Charter Commitments

Sappi's Charter Commitments outline the way Sappi Europe wants to do business, our targets and results. They provide clear guidance to all our staff, suppliers and shareholders on how the company will behave and how we believe it must operate. They are used as tools to help us establish benchmarks, measure our progress and implement action plans.

People

Improving the lives of people through products that enrich their lives and by providing an environment in which they can develop their full potential.

- Cultivating an inclusive, diverse workplace
- Being a great place to work
- Providing training and development opportunities
- Prioritising wellbeing, safety and health
- Partnering with communities
- Engaging with stakeholders openly and constructively



Planet

Treading more lightly on the planet by balancing our needs with our impact on the Earth.

- Reducing greenhouse gas emissions and increasing our use of renewable energy
- Safeguarding biodiversity by promoting sustainable forestry
- Continuing our commitment to independent environmental, wood and fibre certification systems
- Reducing solid waste and improving water quality
- Promoting the recovery and use of recycled fibre
- Conforming with best environmental practice and legislation

Prosperity

Generating prosperity as our ability to remain a sustainable player is founded on generating profits in the short and long term.

- Focusing on long-term profitable growth
- Driving customer satisfaction through technology and innovation
- Building on our competitive position in our core markets
- Maintaining our licence to trade
- Promoting an ethical culture
- Creating value for all stakeholders

Our Products

- sappi | Galerie™
- sappi | Royal™
- sappi | Magno™
- sappi | GalerieArt™
- sappi | Quatro™
- sappi | Vantage™

Sappi's European business portfolio includes:

Printing Papers

Our range of coated and uncoated graphic printing papers cover varying visual and tactile qualities making them suitable for high volume heat set web offset, sheetfed offset as well as digital printing.

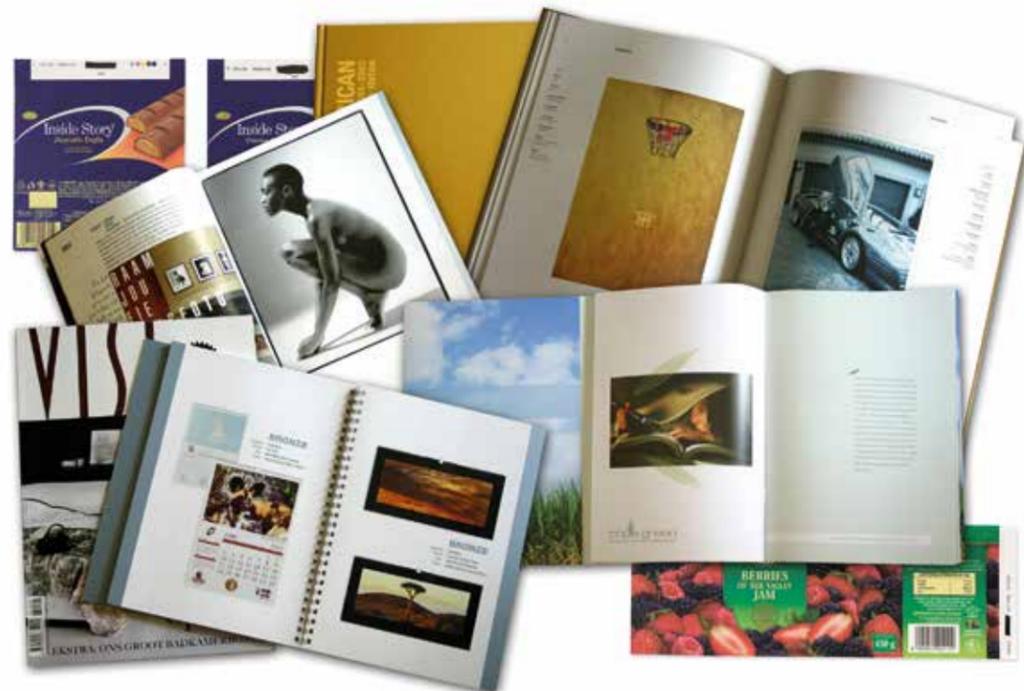
Our heat set web offset products are delivered direct from production to customer specifications and cover a wide range of grammages.

The range includes:

- **LIGHT WEIGHT COATED (LWC)** - typically used in weekly magazines or catalogues distributed by postal services.
- **MEDIUM WEIGHT COATED (MWC)** - typically used in high quality consumer magazines, catalogues and marketing materials.
- **COATED AND UNCOATED FINE PAPERS (CFP/ UFP)** - typical end uses range from magazines, catalogues and brochures to direct marketing.

Our sheet fed products are distributed directly to customers and through preferred stockist merchant partners. They are available in standard stock sizes and non-standard sizes. Typical uses are short to medium volume production of high quality brochures, catalogues, corporate report & accounts, direct mail, calendars, books and magazines.

Our product ranges include high bulking papers that give the impression of a thicker, stiffer paper but at the same weight as a standard paper. Perceived value can be increased with extra bulk. Mailing and production costs can be reduced through the use of lower basis weights without sacrificing quality. This gives our customers the opportunity to create the savings and paper choices most suited to their situation.



Printing papers



Packaging and Specialty Papers

- sappi | Algo Design
- sappi | Algo
- sappi | Sol
- sappi | Fusion Topliner
- sappi | Guard
- sappi | Parade

Packaging and Specialty Papers

As a global packaging material and solution provider, we offer an extensive range of innovative products and services, which increase the efficiency, effectiveness and profitability of fibre-based solutions. Known for our partnership approach, we work closely with brand owners, converters, printers, designers and communication agencies to deliver outstanding results throughout the supply chain.

- Flexible Packaging
- Label Papers
- Functional Papers
- Containerboard
- Paperboard
- Silicone Base Papers
- Technical Papers

Biomaterials

With a strong focus on innovation and R&D, Sappi is committed to developing new processes and biomaterials which extract more value from each tree and support our business strategy to move into new and adjacent markets.

Bio-energy

Globally, over 52% of the energy generated by our operations is derived from renewable sources. In many of our European mills, renewable energy is created in the form of biogas. Sappi is reviewing the expanded use of anaerobic digestion technology as one of the technologies to treat waste condensate. Rich in organic matter, the condensate can be treated via a process which uses organic acids to produce biogas in the form of methane, which in turn can be used to produce energy. Sappi is also evaluating the extraction of chemicals from the condensate stream.



Biomaterials - nanocellulose can be used as a food thickener

Our European Presence

Headquartered in Brussels, Belgium, Sappi Europe is the leading European producer and supplier of coated fine paper and packaging and speciality papers.

Sappi Europe is a division of Sappi Limited (JSE), a global company headquartered in Johannesburg, South Africa, with 12,100 employees and manufacturing operations on three continents in seven countries and customers in more than 100 countries.

Sappi Limited produces:

- 5.4 million tons per annum of paper
- 2.2 million tons per annum of paper pulp
- 1.4 million tons per annum of dissolving wood pulp.

Sappi Europe

48%
of group sales

7
mills

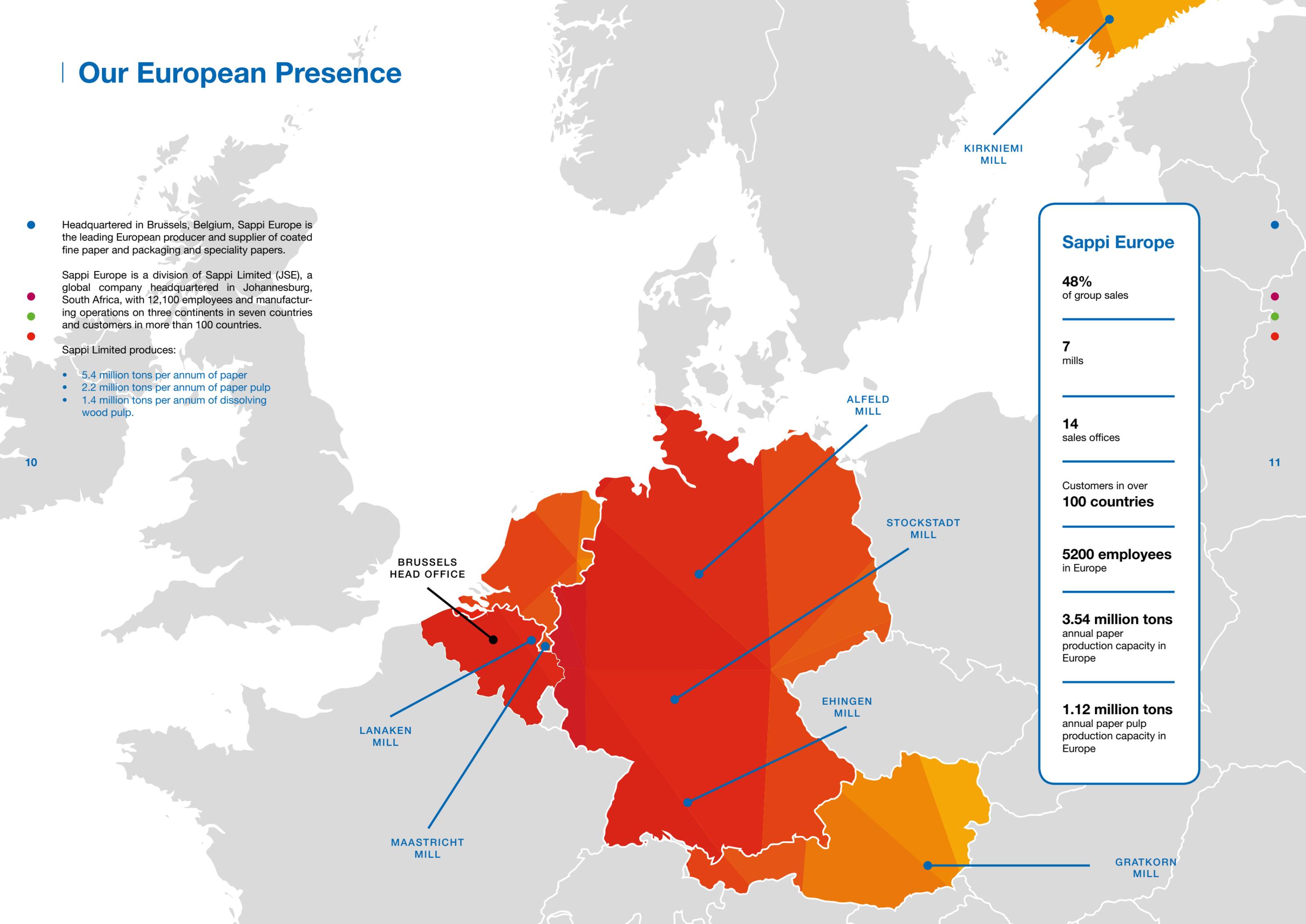
14
sales offices

Customers in over
100 countries

5200 employees
in Europe

3.54 million tons
annual paper
production capacity in
Europe

1.12 million tons
annual paper pulp
production capacity in
Europe



Our European Manufacturing

ALFELD MILL

• Germany
 Products: Coated and uncoated speciality paper
 Paper capacity ('000 tpa): 275
 Paper pulp capacity ('000 tpa): 120
 Employees: 800



KIRKNIEMI MILL

• Finland
 Products: Coated paper
 Paper capacity ('000 tpa): 750
 Paper pulp capacity ('000 tpa): 300
 Employees: 550



GRATKORN MILL

• Austria
 Products: Coated fine paper
 Paper capacity ('000 tpa): 980
 Paper pulp capacity ('000 tpa): 250
 Employees: 1,250



All of our wood suppliers, and all of our pulp suppliers are certified, in most cases in accordance with both FSC® and PEFC™ certification schemes.



tpa = tons per annum



MAASTRICHT MILL

• The Netherlands
 Products: Coated fine and speciality paper
 Paper capacity ('000 tpa): 280
 Paper pulp capacity ('000 tpa): n/a
 Employees: 440



LANAKEN MILL

• Belgium
 Products: Coated fine paper
 Paper capacity ('000 tpa): 530
 Paper pulp capacity ('000 tpa): 165
 Employees: 430



STOCKSTADT MILL

• Germany
 Products: Coated and uncoated fine paper
 Paper capacity ('000 tpa): 445
 Paper pulp capacity ('000 tpa): 145
 Employees: 700



EHINGEN MILL

• Germany
 Products: Coated fine and speciality paper
 Paper capacity ('000 tpa): 280
 Paper pulp capacity ('000 tpa): 140
 Employees: 520





“The knowledge of our people is enormous. If you can find a way to release that knowledge, there is a big benefit in terms of efficiencies and cost. But there is also a big benefit to people’s lives when they can say ‘this is my area. I can improve this.’”

Berry Wiersum
Chief Executive Officer
Sappi Europe

Message from Sappi Europe’s CEO

On Target for Vision2020

Finding synergies, Berry Wiersum, CEO of Sappi Europe is energised about the future.

Our strategic 2020Vision was developed during the course of 2015, and while the core focus remains on improving profitability, cash generation and growth, we have turned our attention to more specific growth targets and aspirations.

Our determination to improve material efficiency is bearing fruit. New opportunities with nanocellulose, biocomposites and biorefinery are enabling us to make better use of the natural wood based materials that we have to hand. More of the valuable biomaterials will be refined and used for high quality products instead of being converted directly into energy sources.

We have worked on our paper portfolio to better match market expectations. The increased share of packaging in our portfolio will bring us closer to the brand owners and consumer expectations.

We are vigilant in terms of improving efficiencies within our own operations, and work in partnership with our customers to improve efficiencies throughout the supply chain. We have helped many of our customers to optimise their stocks and to minimise their waste.

SPE&i as a tool for success

SPE&i will be key to achieving our objectives. Thus far, the Sappi Performance Engine (SPE) has provided a good framework to focus on continuous improvement (CI), which is an ongoing effort to improve products, services and processes. SPE&i builds on this, by unleashing, and nurturing the knowledge of all our people.

As a company, you make a strategy: you decide which markets you want to compete in and you invest in assets. But the return on your investment – and the performance of your assets – is not cast in stone. It is the workforce of a company that decides on how high the return is. Through SPE&i, we’re looking to engage each and every one of our employees not only to ensure a return on our investments, but also to maximise our assets’ output.

Investing in the future

In a move that supports Vision2020, the company will be making significant investments in our existing asset portfolio to facilitate growth and profitability. The investments in Alfeld, Ehingen, Maastricht and Lanaken are the outcome of a profound analysis of the company’s European assets aligned with market opportunities. It’s an exciting time for the company, putting the focus on getting the most out of what we have. We recently acquired Rockwell Solutions in Scotland which has unique technology to create multi-barrier coatings applicable to paper, with the aim of replacing plastic in food packaging.

Prioritising Safety

As important as it is to set and achieve objectives, ensuring the safety of everyone who works at Sappi must inform everything we do. Safety is an ethical imperative for which every one of us must accept responsibility and demonstrate leadership. It also impacts productivity, costs, our reputation and ability to focus on executing our strategy.

Maximising the value of wood-derived products

Sappi Biotech was established to take global responsibility for the commercialisation of our bio-energy wood chemistry products portfolio. This new business unit reflects our response to market demand for a lower carbon footprint and renewable products. The initial focus will be on our lignin and nanocellulose businesses.

Further details on Sappi’s Vision2020 can be found on our website and in our Annual Report.

CHAPTER 1

Commitment to Sustainability

People

Working Together

Sappi's 2020Vision is to reshape our business through further diversification. Changes in marketing approach, asset utilisation and business philosophies are designed to place Sappi on a continued and sustainable growth path.

Working in parallel, the group's One Sappi initiative across regions and business units aims to avoid duplication, increase synergies, maximise the value of its global brand and engage customers and stakeholders in a consistent manner and build a vision of a unified organisation.

Through ongoing investments in our people and manufacturing assets, we are continuously strengthening our position as a leader in the industry segments we serve, with increased positive growth in speciality papers as planned.

At the foundation of all our progress lies the Sappi Performance Engine (SPE), a process specifically designed to transform Sappi Europe into an organisation dedicated to Continuous Improvement (CI) where people can, and do, unlock their potential.



“Encouraged by the successful SPE-journey over recent years and using insights gained from best-practice CI-leaders, we have started a transformational change initiative which aims at putting the knowledge, skills and passion of all our people more at the center of our attention.”

Rainer Neumann
VP Human Resources
Sappi Europe



“We do a Roadshow once a year at all the mills and major sites, open to all employees, where we go through the business in some detail and tell them our plans to improve it the following year. We are extremely honest and open because there's no point in feeding your own people fairy stories and then expect them to have confidence in you.”

Berry Wiersum
Chief Executive Officer
Sappi Europe

Communication and Strategy Initiatives

- Annual roadshows by the CEO, supported by the respective European functional heads
- Cascading corporate and regional strategy; and ensuring through the Hoshin Kanri deployment process that key business goals, projects and improvement initiatives are linked and followed through organisation-wide. Hoshin Kanri is a method through which company objectives and priorities are deployed from the European Management Team down into the organisation. It improves horizontal alignment and collaboration across sites and functions.
- Consistently running performance management: in business year (BY) 2016 86% of our eligible staff were included in performance management. We will continue to aim for 100% completion rates as well as including not yet eligible employees into this important people process.
- All of our CI-related initiatives alongside the many other strategic and people-related initiatives over the last few years have helped us to successfully migrate to a better future. We have improved our underlying cost basis based on operational excellence through all our people, have successfully launched a different way of going to-market in our Graphics business, and have substantially increased our Specialities & Packaging business.

Cultivating an Inclusive, Diverse Workplace

We recognise that diversity facilitates interaction with different cultures, colleagues and customers in an increasingly globalised marketplace. By creating an inclusive culture representative of a diversity of people, thoughts and ideas, we enhance our ability to operate in global markets.

Despite greater efforts, the recruitment and retention of women in the workplace remains a challenge. Women have traditionally been under-represented in engineering domains. Bringing female trainees on board has been successful, and we continue to focus on appointing women at management levels.

Sappi has implemented policies to ensure that the workplace is free of discrimination and harassment. Structures and processes are in place to deal with problems should they arise.

Training and Development

A key component of our Employability Strategy is to ensure that both managers and staff take joint responsibility to nurture employability through personal and professional development. This leads to increased engagement in learning and training opportunities, mobility across jobs, and functional mobility. Fostering a culture of life-long learning supports our strategy.

Universe is a digital learning platform launched two years ago, the purpose of which is to offer support before, during and after any form of development and learning such as training. By increasing the interactivity between our employees and internal trainers, as well as between participants, the impact of the training can be effectively prolonged.



Universe Facts and Figures

- 2635 employees were active on Universe, meaning they either started or completed courses
- 24.8% are new users, while 75.2% are frequent users
- In 2017, 2040 courses were completed, compared to 263 in the whole of BY16

Designing and investing in effective training is very important for Sappi. Company-wide targets to ensure that employees receive an average of 30 hours of training per year were successfully reached in recent years.

Our 70:20:10 approach has helped us to considerably increase awareness and importance of learning and development through alternative means rather than formal training. Whilst formal training via classroom structures remains important, it only has 10% impact. The most effective means (70%) is through on-the-job training with specific project assignments, and working in multidisciplinary and/or multinational teams. The manager's coaching role accounts for 20%.

5:0:5 is a tool that is used to support managers and employees in agreeing expectations prior to any training and development initiative. This helps the employee to go through the initiative with full focus, discussing and aligning post intervention on learnings and use of training.

Driving leadership culture within the company has been an ongoing priority. Over the last 2 years, we have continued to provide a variety of in-house leadership development initiatives to further enhance our leadership culture and support change initiatives (e.g coaching and situational leadership refreshers).

Sappi's apprenticeship programme provides more than 220 school leavers with training for roles such as paper makers, process operators, engineering artisans and business clerks. At management level, Sappi's pan-European two-year graduate trainee programme enables the company to source and grow managerial talent.



“Since expanding our offer, participation to our Universe digital learning platform has increased. We have recently launched a rating feature to collect feedback. Our current focus is more on inhouse Sappi knowledge, including the introduction of a specific SPE&i module.”

Lidewij Van Nevel
Organisation & People Development Specialist
Limburg



Stockstadt apprentices on their first day at the mill

Prioritising Wellbeing, Safety and Health

Sappi Europe (SEU) completed FY2017 with an LTIFR (Lost Time Incident Frequency Rate) of 0.77. Maastricht Mill was the best performer with LTIFR of zero. The SEU 2020 LTIFR target remains at 0.52.

The FY2017 LTISR (Lost Time Incident Severity Rate) is at 162.8 due to a serious accident at Stockstadt Mill which tragically resulted in the death of one of our employees.

Focus going forward

Sappi Europe's objective is to be the safest pulp and paper company in Europe. The strategic objectives in support of this goal are:

- Improving LTIFR by 10% per year with an ultimate goal of achieving 0.52 in 2020
- Making the safety of personnel the first priority in all operations, and
- Ensuring that no employee will suffer permanent loss of the use of a body part or a fatal injury.

Engaging with Stakeholders Openly and Constructively

Engaging with our stakeholders is very important. We have a number of structures in place to facilitate interaction. The overall Industrial Relations climate between Sappi Europe and its involved stakeholders (unions, works councils, employees) continues to be constructive and good. Bargaining and negotiations take place in good faith overall.

In line with European legislation all employees have freedom of association – the estimated level of association is about 72%. Wage negotiations take place through different platforms depending on the country.

At policy level, Sappi Europe engages with CEPI (The Confederation of European Paper Industries), BIC (The Bio-Based Industries Consortium), Two Sides, Print Power and the Green Growth Platform. At local level, Sappi Europe companies are also members of national paper industry associations.

Engagement and Staff Retention

The Sappi Group employee engagement survey measures our staff's attitudes at work. It measures the level of sustainable engagement, in particular whether our staff are motivated and enabled to deliver their best performance.

The participation rate for the 2017 survey for Europe is 87%, up 16% since 2015 and above target.

The 2017 sustainable engagement rate was 78%, 3% above target. This measures whether employees are engaged, enabled and energised. High Sustainable engagement levels have a positive impact on retention risk, days lost (absenteeism) and operating margin.

Sappi needs to keep its best people, and a low staff turnover rate is a clear indicator of whether or not this is happening. In 2017, Sappi's turnover rate was 5.9%. The company's voluntary turnover numbers have averaged out at around 2.5% in recent years.



Health and Safety Initiatives

KIRKNIEMI MILL

Wellbeing 2017

Kirkniemi Mill embraced the wellbeing theme throughout 2017, with different related initiatives every month including nutrition, everyday exercise and mind-set. The interactive nature of the initiative was designed to inspire employees to interact, and make informed choices that support their wellbeing and employability.

- **Male Fit Group:** A one year programme targeting men at the mill, focused on enhancing current and future wellbeing and employability. Group members are taught how to eat and exercise correctly, how to lose weight, and how to rest.
- **Will 2018!** A one year programme with three subgroups: Lose Weight! Move! and Keep Going! managed by external health care professionals. Participants decide on targets and are given the tools, support and motivation to achieve them.



MAASTRICHT MILL

Sustainable Employability Initiative



Keeping everyone healthy, happy and working until retirement is the objective of the Sustainable Employability initiative in Maastricht Mill (Duurzame Inzetbaarheid (DI)). Measurement against a workability index provides employees with an overview of their ability to work, their health, vitality and sustainable employability.

Spearheaded by an employee based working group in combination with a Steering Group composed of Directors and Unions, the initiative will develop campaigns and actions designed around KPIs to create awareness for employees about sustainable employability.



GRATKORN MILL *Award Winners*



In 2017, Gratkorn Mill won the 2017 National Award for Occupational Health Promotion (Preise für Betriebliche Gesundheitsförderung -BGF) from the Austrian network for health management (BGF) in recognition of their sustainable health management activities over the last 16 years. The objective of this award is to make the sustainable and innovative activities carried out by Austrian companies visible in the field of occupational health promotion. Gratkorn Mill also received the Regional Styria Health Award "Steirischer Gesundheitspreis" (only awarded every three years) and certificate for Health Management for 3 years (2017-2019) known as "Gütesiegel für BGF".

LANAKEN MILL *Work Floor Initiatives*

A number of initiatives are underway at Lanaken Mill, supporting employees in their approach to work. A working group on Workable and Agile Work (werkbaar en wendbaar werk) means that employees and unions can discuss relevant issues and look for solutions together. A 'coaching on the work floor' initiative is focused on work related behaviour by providing tips and feedback, as well as setting good examples and raising awareness about safe work. A new sheeting production unit is trying out a new shift system that involves a more flexible schedule with competitive labour costs.



STOCKSTADT MILL *Reaching a Million*

In October 2016, Stockstadt Mill reached 1 million work hours without LTI (Lost Time Injury) (reached 27 June 2016). In total, 505 days (=1.836.739 hours) without LTI were attained. This was achieved as a result of ongoing safety actions including safety walks, BBS audits (Behavior Based Safety), and ensuring that safety is addressed during each and every team board meeting.



ALFELD MILL *10 Steps for Safety*

A very hands on approach in Alfeld Mill with their 10 Steps for Safety initiative led to an increase in BBS (Behavior Based Safety) audits, safety walks and talks. Approximately 1500 safety training hours were spent during a series of Shift Training Days to raise awareness about safety. Close to 800 attendees participated over the course of 6 days. Implementation and training on Last Minute Risk Assessments is also part of the programme.



EHINGEN MILL *Sappi Safe and Sappi for Sure*



Ehingen Mill launched a new sustainability initiative with the slogan "Sappi aber sicher." In German, this has a double meaning: Sappi safe and Sappi for sure. The objectives of the initiative are to improve safety culture, reduce LTIs (Lost Time Injuries) and to become one of the safest papermills in Europe. In order to engage people, a series of workshops were organised with the purpose of sensitising employees to safety, as well as assessing personal values. A steering committee has been put in place to drive the campaign.



Josef Affenberger and Erwin Jaritz, Gratkorn Mill Quality Control PM11



Stefan Scherb, Heiko Zoller, Dietmar Hoffmann, Ehingen Mill Quality Control

Spotlight on Safety

The pulp and papermaking process presents several safety risks including the use of certain substances and products, the operation and maintenance of machines, exposure to high temperatures and the transport and handling of different kinds of loads. Sappi Europe's Vision2020 for safety is to be the safest Pulp and Paper company in the EU. It goes without saying that the priority is the safety of our personnel. Strategically, the objective is to have a Lost Time injury Frequency Rate (LTIFR) rate of 0.52 by 2020, and a Lost Time Injury Severity Rate (LTISR) of 5.0, with zero permanent total loss of use of a body part or fatal injury.

As part of our Sappi Europe Safety Strategy 2020, an action plan has been put in place which is managed by the company's Safety Platform. This active platform is comprised of the Safety Managers from each of our 7 mills, as well as a general safety coordinator and sponsor, who meet and speak on a regular basis, exchanging best practice and experience.

The action plan consists of five pillars:

— 1

Technical Measures

- Recording of all work incidents and hazard notifications (SARA – Situational Awareness and Response Assistant)
- Technology and Engineering safety projects (T&E)
- Mill Visits and Safety Checks

— 2

Working Safety

- Practical approach with tools to assess risk
- Booklet with questions to check before starting work
- Behaviour Based Safety (BBS) observation
- Identification and removal of hazards
- Proactive collective thinking about how to improve safety

— 3

Communications

- Channels and tools to communicate about safety
- Topic-focused monthly Safety Flashes
- Adhoc Toolbox Meetings with practical tips to address current safety issues
- Themed Visual Campaigns
- Global Safety Awareness Week involving employees and local communities

— 4

Management's Commitment

- Safety is number one priority and addressed in all meetings
- Regular safety site walks
- Safety is component of leadership training
- Implementation of contractor safety programme

— 5

Mill's Safety Programme

- Objective is to change safety behaviour and improve culture
- Safety is each individual's responsibility



Thomas Zschirpe and André Baum looking at a machinery plan at the Utilities Department in Stockstadt.

Planet

Tracking our Environmental Performance

At Sappi Europe we have chosen to be eco-effective, integrating the way we do business with our approach to the environment, which is based on a holistic view of People, Planet and Prosperity (the 3Ps). This means we are effective in an efficient way, reaching our goals and objectives with optimised impact.

Key Performance Indicators

Our pulp and paper products are derived from renewable resources made with high levels of renewable energy. Sappi Europe uses key performance indicators (KPIs) to measure and track its environmental performance.

We track key metrics for fibre, emissions, energy usage and the impact of our operations on air, water and solid waste and use this data when setting improvement goals related to our operations.

Sappi Europe's 2020 Sustainability Targets include a reduction of specific CO₂ of more than 5%, and a maintained 70% target for certified fibre. Reducing energy and raw material consumption during production of our products is a priority.

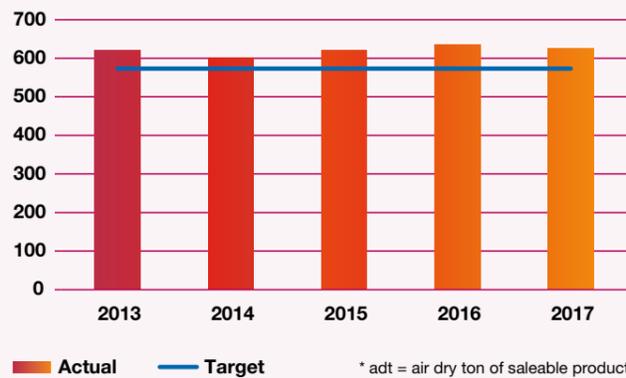


Selective harvesting at Spessart Forest in the northern part of Bavaria, Germany

Reducing Energy and Raw Material Consumption During Production of our Products is a Priority

Reduction of Specific CO₂

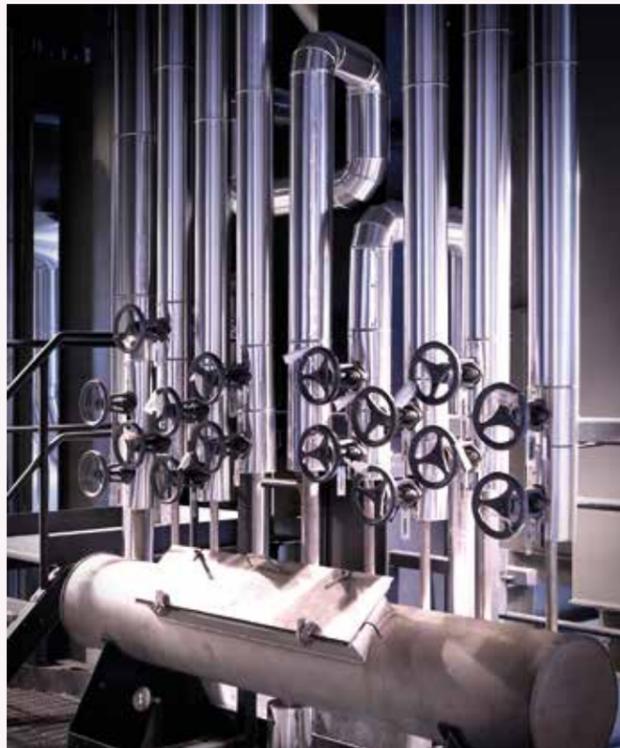
SPECIFIC CO₂ kg/adt*



Reducing energy consumption during production of our products is a priority. In 2017, Sappi Europe finished 50 energy savings projects across our European mills. In total, the energy and fuel consumption was 680 000 GJ (gigajoule) lower than in 2016.

Sappi Europe's 2020 CO₂ target is the reduction of specific direct fossil CO₂ emissions, including purchased power emissions, by more than 5%. In 2017, our specific use increased by 3.9% compared to the reference year of 2014. The fact that the majority of our mills did not run at full production capacity, and that the fuel mix used contained high levels of coal contributed to this increase.

Specific direct fossil CO₂ emissions refer to kilos of CO₂ per tonne of sold pulp and saleable paper. The CO₂ figures shown in the graph are the sum of specific direct CO₂ emissions and the indirect CO₂ emissions from the external electricity supply. Purchased power emissions are calculated at 400g/kWh, unless sourced as green power with confirmed zero CO₂ emissions.



Kirkiniemi Mill Powerplant

Certified Fibre

CERTIFIED FIBRE SHARE %

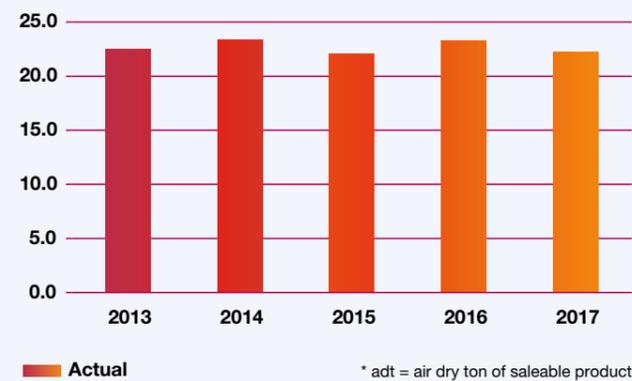


Since 2009, Sappi has succeeded in maintaining a minimum of 70% certified fibre share thanks to our chain of custody approach and strict certification requirements. All of our wood suppliers, and all of our pulp suppliers are chain of custody certified.

Sappi Europe uses the certification standards of the Forest Stewardship Council (FSC®) and the Programme for the Endorsement of Forest Certification (PEFC™) schemes for its fibre sources.

Reduction of Specific Water Use

SPECIFIC WATER USE** m³/adt*



At Sappi Europe, water is abundant at all of our mill locations with no water shortage risks foreseen. Even in areas of high population, water is readily available.

Our water use has an impact on energy consumption. It is heated up during the paper and pulpmaking process. Consequently, our mills lose energy through their water discharge.



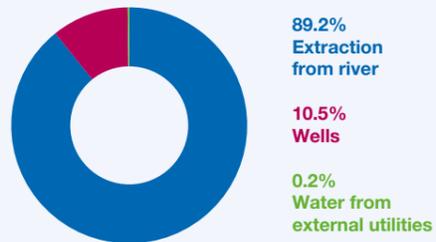
Lake Lohja where our Kirkiniemi Mill takes its water from

** Specific Water use refers to the amount of water used per ton of saleable product manufactured. Water discharged from the mill is used as a basis for measurement.

Key Performance Indicators 2017

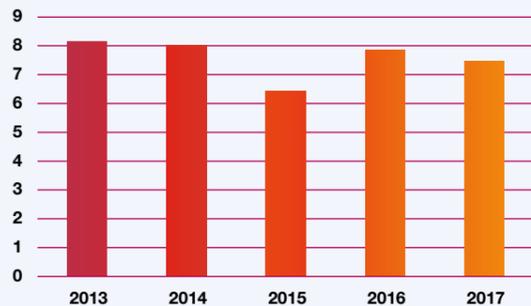
Water

TOTAL WATER WITHDRAWAL BY SOURCE 2017



Kirkniemi, Maastricht and especially Stockstadt Mill have managed to optimise their wastewater plant operations which has led to significant reductions in COD (Chemical Oxygen Demand) at these mills. Over the course of the last five years, we have achieved a reduction of 8% in specific COD. The visible deviation in 2015 is caused by a long operation break at our pulp mill in Gratkorn during the rebuild of the recovery boiler. Of the water we use, 89.2% originates from surface waters (rivers, lakes, canals), 10.5% from our own wells and 0.2% from external utility companies.

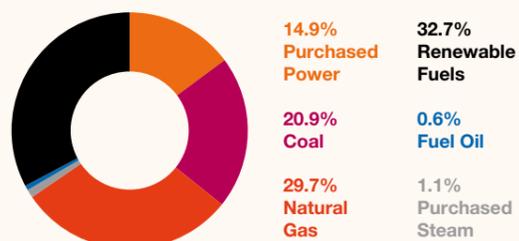
CHEMICAL OXYGEN DEMAND (COD) kg/adt*



* adt = air dry ton of saleable product

Energy

TOTAL ENERGY USE 2017

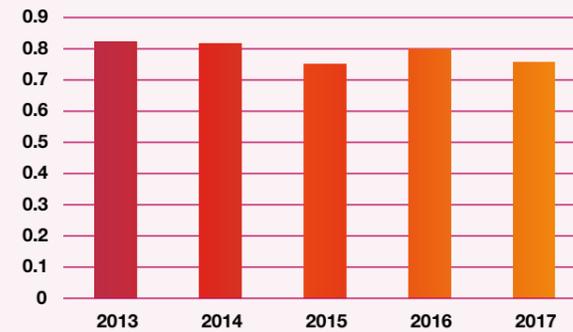


Energy use did not vary significantly in 2017. Renewable fuels consist mainly of black liquor, wood residues, sludge and small quantities of own generated biogas.

Since the energy market is highly volatile with constantly changing prices for power and gas, we are as yet unable to run our power plants at optimal efficiencies.

Emissions

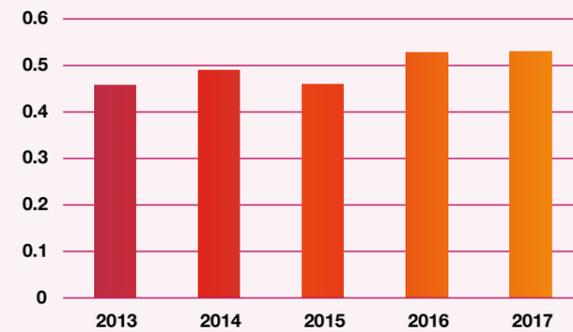
NO_x EMISSIONS kg/adt*



NO_x (nitrogen oxide) emissions originate from fuel combustion. In 2017 NO_x emissions were slightly reduced compared to the previous year, especially at our Alfeld and Stockstadt Mills. Reduction of NO_x emissions is difficult because nitrogen is present in air and all known reduction methods would compromise energy efficiency.

* adt = air dry ton of saleable product

SO₂ EMISSIONS kg/adt*



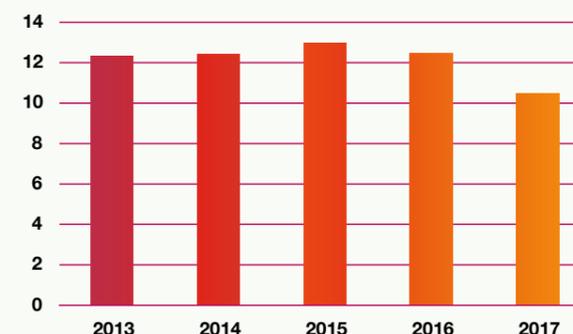
Our SO₂ (sulphur dioxide) emissions originate from the black liquor, biomass and coal that are used as a fuel at our power plants. Despite effective technical treatment of the combustion gases, sulphite pulp production typically leads to higher specific SO₂ emission levels than kraft pulp.

On the other hand, there are virtually no AOX (adsorbable organic halides) emissions since we bleach our pulp totally chlorine free.

* adt = air dry ton of saleable product

Waste

LANDFILLED WASTE kg/adt*



In five years we have achieved a specific reduction of 15% in landfilled waste. Stockstadt mill has achieved the biggest reductions compared to 2016 levels.

* adt = air dry ton of saleable product

Shaping Policy

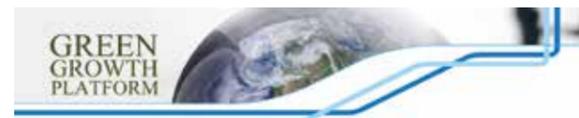
Green Growth Platform

The Green Growth Platform (GGP) brings together ministers from European governments, businesses and the European Parliament to discuss and debate the economic opportunities and challenges involved in the transition to a low carbon, resilient economy. It is comprised of ministers from 16 governments, 18 members of the EU parliament and some 40 major businesses.

The University of Cambridge Institute for Sustainability Leadership (CISL) acts as the secretariat for the platform, and The Prince of Wales's Corporate Leaders Group, which is also convened by CISL, acts as a strategic advisory body to the GGP.

In June 2017, Sappi was a co-signatory to a letter addressed to European environment, climate and energy ministers ahead of the June Environment and Energy Council meetings, urging them to support a continued focus on action to tackle climate change.

The letter stated that the "EU must continue to demonstrate leadership on climate change in order to drive jobs, growth, and investment, and remain competitive with other major economies." It highlighted the "increasing ambition of emerging economies such as China and India and the need for continued leadership from the EU if European industries are going to survive in the competition for low carbon goods and services."



A focus on the future of emissions trading

The third phase of the EU Emissions Trading Scheme (EU ETS) will come to an end in 2020. Set up in 2005, the EU ETS is the world's first and biggest international emissions trading system, accounting for over three-quarters of international carbon trading. CEPI, the Confederation of European Paper Industries, of which Sappi is a member, is already involved in discussions pertaining to Phase Four of the EU ETS where the introduction of stringent regulations is expected.

The reduction of CO₂ emissions has already been a priority for Sappi mills for a long time with implemented changes making a positive impact.



CEPI Roadmap: A focus on financing

In 2011, the pulp and paper industry was one of the first in the European Union to draw up a roadmap to reduce CO₂ emissions by 80 per cent by 2050.

In 2016, the roadmap moved into its second phase, with the emphasis on financing, looking at how the industry can access money for investments. CEPI published a discussion paper outlining the industry's progress and the need for financing. The paper also outlines ideas such as using tax breaks for green investments (in combination with Emission Trading Schemes). Stephen Blyth, Chief Financial Officer, Sappi Europe chairs the roadmap working group.

European industry in the 21st century: New models for resource productivity

Sappi has contributed to a report drafted by The University of Cambridge Institute for Sustainability Leadership CISL. The report is based on interviews with companies that are using circular economy principles to reduce their exposure to risk, and to access new markets. It discusses some of the successful transformations and changes made, obstacles faced, and potential policies for overcoming those obstacles.

All fourteen companies interviewed for the report are changing the way they operate: re-designing products to use fewer materials and last longer, choosing bio-based inputs, and reusing or recycling waste. They are responding to a context of diminishing natural resources, increasing supply chain vulnerability, and the need to reduce carbon dioxide emissions and environmental impact. The benefits include cost savings, enhanced reputation, and consumer loyalty. (Source: Cambridge Institute for Sustainability Leadership (CISL). (2017). European industry in the 21st century: New models for resource productivity, Cambridge, UK: The Prince of Wales's Corporate Leaders Group.)

The report was published in September 2017 and can be found online.



Prosperity

It's All About Growth



“Over the last several years, our approach has been to decrease costs, increase market share and retain volumes. Now, our focus is on the growth in revenues of our graphics business and a move to specialities, while keeping a keen eye out for acquisition opportunities. By prioritising financial soundness, we are able to continue with the assets that we already have.”

Stephen Blyth
Chief Financial Officer
Sappi Europe

Investing in the future

In a move that supports Sappi Europe’s 2020 Vision, the company will be making significant investments in our existing asset portfolio to facilitate growth and profitability. The investments in Alfeld, Ehingen, Maastricht and Lanaken are the outcome of a profound analysis of the company’s European assets aligned with market opportunities.

The investment at our Lanaken Mill will develop the infrastructure to support our vision of being the lowest cost and best service provider in coated fine papers. This underlines our commitment to print media and – together with our co-development initiatives with our customers – it will ensure that print remains a powerful message carrier within the media mix.

The investments will also double our speciality and packaging business in Europe, whilst bringing speciality and packaging production to three new mills – Ehingen, Maastricht and Stockstadt.

To accommodate these changes, we are reducing the capacity of our graphics business by about 200kt over the next three years to maintain cost, service and product leadership.

MILL	Investment	Mill Outcome 2017-2019
ALFELD	Expansion of light weight packaging and speciality paper capacity by 10kt pa	Light weight packaging, silicone base papers and barrier papers
MAASTRICHT	Conversion to enable high quality solid bleach board production	Heavy weight packaging, barrier boards and board weight graphics
GRATKORN	N/A	Coated fine paper including board weight graphics
EHINGEN	PM quality & efficiency upgrade	Coated fine paper and white top liner
LANAKEN	Conversion to enable coated fine sheet production	Light weight coated fine paper including sheets
KIRKNIEMI	N/A	Mechanical coated
STOCKSTADT	N/A	Uncoated on PM1, PM2 coated fine paper and new packaging and speciality products

By 2020, the Sappi Group earnings before interest, tax, depreciation and amortisation (EBITDA) composition will look as follows:

- 25% derived from Printing Papers
- 25% derived from Packaging and Speciality Papers
- 40% derived from Dissolving Wood Pulp
- 10% derived from new business opportunities such as biomaterials, biorefinery products and bio-energy

Deep Eutectic Solvents DES – Contributing to reduced carbon footprint for the industry.

Triggered by the CEPI 2050 Roadmap, the Two Team Project was initiated with a view to kick-starting open innovation and investigating new game-changing technologies that could cut the carbon footprint of pulp and papermaking. DES (Deep Eutectic Solvents) was deemed the winning technology.

Deep Eutectic Solvents (DES) are nature based, renewable, biodegradable, low-volatile and cost-effective. When used for producing high-quality cellulose fibers in paper-making applications, they are extremely energy efficient, particularly because they do not require high temperatures. They offer a groundbreaking new method for the pulping of many different lignocellulosic materials for producing chemical pulp, pure lignin and other chemicals. (Source: CEPI 2016)

A research and innovation project to drive DES in our industry now exists under the umbrella of BIC (the Biobased Industries Consortium), which is chaired by Mat Quaedvlieg (Sappi). Tests have indicated that the process works; the dissolving of lignin is milder and might require significantly less energy compared to traditional pulping. This is an important step in helping the industry to work towards a lower-carbon bio-economy. The recovery is still the challenge. The building of a pilot plant is under discussion and the first test-papers (unbleached) have been made and tested. The results are very encouraging so far.



Understanding the market

Sappi has developed more direct relationships with printers to improve supply chain efficiency by adapting paper production and supply so that it is more in line with real demand in printing.

By working directly with customers and identifying opportunities for increased efficiency, business performance can be improved. Consumption can be analysed, processes can be simplified, and ultimately efficiency can be increased.

This co-development process lays the foundations for a better common future for Sappi and its customers, working in a more efficient manner, and using resources in a better way.

Adjacent Markets

With a strong focus on innovation and R&D, Sappi is committed to developing new processes and biomaterials which extract more value from each tree and support our business strategy to move into new and adjacent markets.

Nanocellulose: a lightweight ‘super material’ with diverse functionality

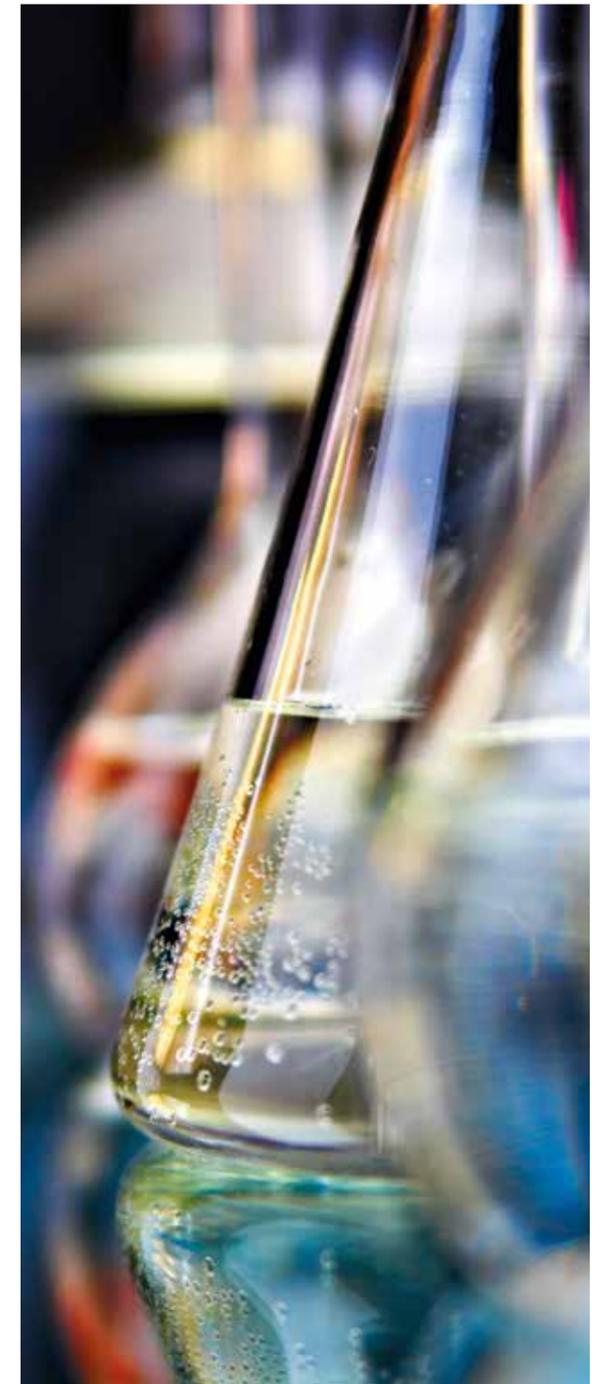
A partnership between Sappi and Edinburgh Napier University has resulted in the development of a new low cost process to make lightweight Cellulose NanoFibrils (CNF) on a commercially viable basis. The nanocellulose scale is so minute that 2,000 nanofibres can easily fit into a single strand of human hair; yet a relatively small addition of CNF can increase the characteristics of many materials substantially. A pilot plant built on the Brightlands Chemelot Campus in Sittard-Geleen, the Netherlands is now operational, producing nanocellulose fibres from various pulp sources.

Sappi Biotech is currently testing multiple applications of CNF which can be used in a wide range of applications including food and cosmetics, wound care, packaging, concrete admixtures, homecare products, paints, touch screen displays and car panels. It furthermore has been shown that application of CNF, or its predecessor Microfibrillated Cellulose (CMF), can significantly improve strength and quality of many paper grades, either produced from virgin or from recycled fibres. Currently available as a water based gel, the next step in the technology development is to produce a dry and fully re-dispersible CNF-grade.

www.sappi.com/nanocellulose

“We have stopped seeing by-products as waste and are now looking deeper at the value that we can derive from every tree.”

Berry Wiersum
Chief Executive Officer
Sappi Europe



Hemicellulose sugars extracted from black liquor

“Theoretically, anything you can do with oil, you can do with trees, so we need to figure out what issues there are and if we can make it on a cost-effective basis.”

Steve Binnie
Chief Executive Officer
Sappi Limited

Symbio: A mouldable material that combines wood’s best qualities and plastic’s designability for optimised product properties

Sappi has developed a technique to use cellulose fibres to produce a new natural composite material combining high quality cellulose from wood and a plastic material. The result is Symbio. Consisting of a composite material with up to 50 % cellulose fibers, it is delivered as granules. It can be injection moulded and its application ranges across furniture, consumer electronics and automotive components, all of which can benefit from a more natural look, soft and warm touch, high rigidity and low density.

The long-term vision is to provide biobased materials fully derived from wood, that offer attractive alternatives to fossil based plastics and composites.

www.symbio-fibrecomposites.com



Sappi Symbio combines wood’s best qualities and plastic’s designability for optimised product properties.

THE SYMBIO EFFECT:

- Soft and warm touch
- Natural matte look, no fibres visible and easy colouring
- Very good acoustic behaviour, sounds less plastic-like
- Very good scratch resistance, high heat deflection
- Very high rigidity, low density
- Perfect fibre dispersion, low odor, low water absorption, consistent quality
- Injection mouldable, short cycle times, low abrasion, lower process temperature
- Renewable content of up to 50% fibre

Lignin

The origin of Sappi’s lignin business is in Europe and dates back almost 100 years. Lignosulphonate is a highly soluble lignin derivative and a product of the sulphite pulping process. As well as giving materials stability, lignin has a wide variety of uses due to its binding ability, dispersing, emulsification, and sequestration properties. Referred to as a ‘green binder,’ it finds application in the production of glasswool, chipboard, fertilisers and many other products where lignin replaces incumbent materials derived from petrochemical origin.

www.sappi.com/lignin



“Although performance is a major aspect of using naturally reinforced materials, they also bring a new dimension to the look and feel of products. Designers like to differentiate their creations by using alternative materials with different textures and touch sensations; we’re exploring what Symbio can bring to this process. So as well as improving the mechanical properties of products, and keeping weights low, the high-end design market could really benefit from our new technology. It’s an exciting area to explore.”

Ana Luisa Matos Vaz
Technical Product Manager
Sappi Europe

Hemicellulose sugars

In South Africa, Sappi is developing ways to extract and modify hemicellulose sugars from wood during the pulping process to create higher-value products for use in a wide variety of applications. Potential products include sugar alcohols such as xylitol, a low-energy sugar substitute; lactic acid, used in the production of polylactic acid (PLA), a renewable plastic; glycols, mainly used in the production of PET for plastic bottles; and unsaturated polyester resins and other products. www.sappi.com/hemicellulose-sugars

Biorefining

To biorefine means to extract and process plant ingredients, converting them for higher value applications. There are biorefineries for sugars, grass and corn. At Sappi, the focus is on biorefining wood and looking at what you can do with the three basic ingredients of a tree: cellulose, lignin and hemicellulose sugars.



“The definition that I like to use is as follows: ‘A biorefinery is a facility that processes biomass into a spectrum of marketable products and energy in an economically, socially and environmentally sustainable way.’ It’s a new and stimulating field to be working in, with many opportunities along the horizon.”

Giorgio Comandé
Biorefinery Engineer
Sappi Europe

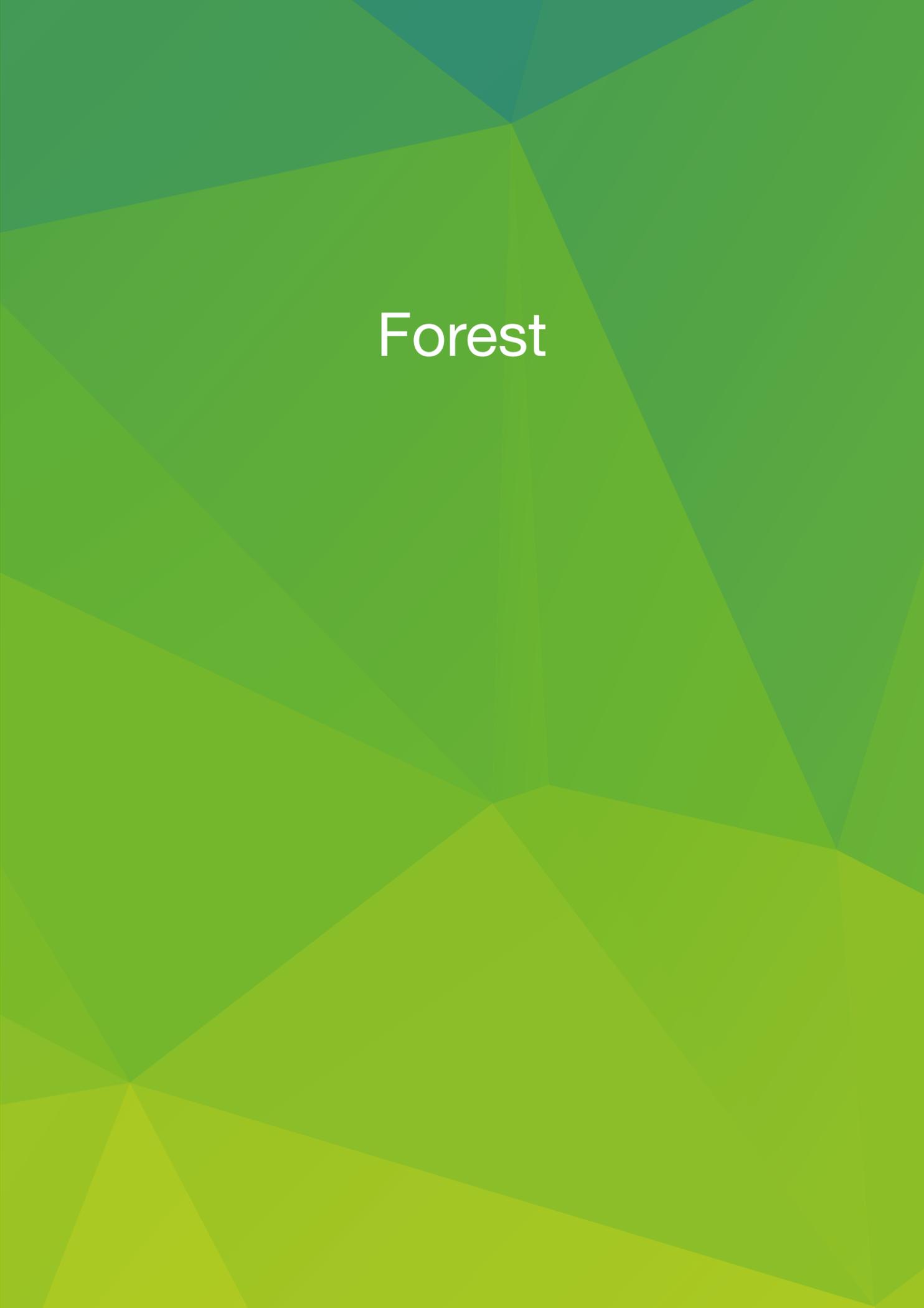


Lignosulphonate application: Pigment dispersion dye

CHAPTER 2

The Sustainable Paper Trail From Forest to Consumer

Forest

The background of the right side of the page is an abstract composition of various shades of green, ranging from light lime to dark forest green. The shapes are irregular polygons that overlap and create a sense of depth and movement, reminiscent of a stylized forest or a modern architectural design.

Our Business Depends on Leftovers

Although the demand for wood is on the rise globally due to population growth and increases in living standards, paper continues to only be a small part of this consumption.



www.sapin.be

Sappi Europe works with Sapin S.A. to procure and transport their wood in the most efficient way possible. The company is a subsidiary of Sappi Group and has a complete view of the market, with the expertise to identify, anticipate and react to supply and demand. It works primarily with Lanaken Mill, where it also uses its experience in logistics to transport the wood by sea vessel, truck, barge or rail.



Wiek Peters and Marco Eikelenboom
Sappi Europe Tree Planting day March 2017

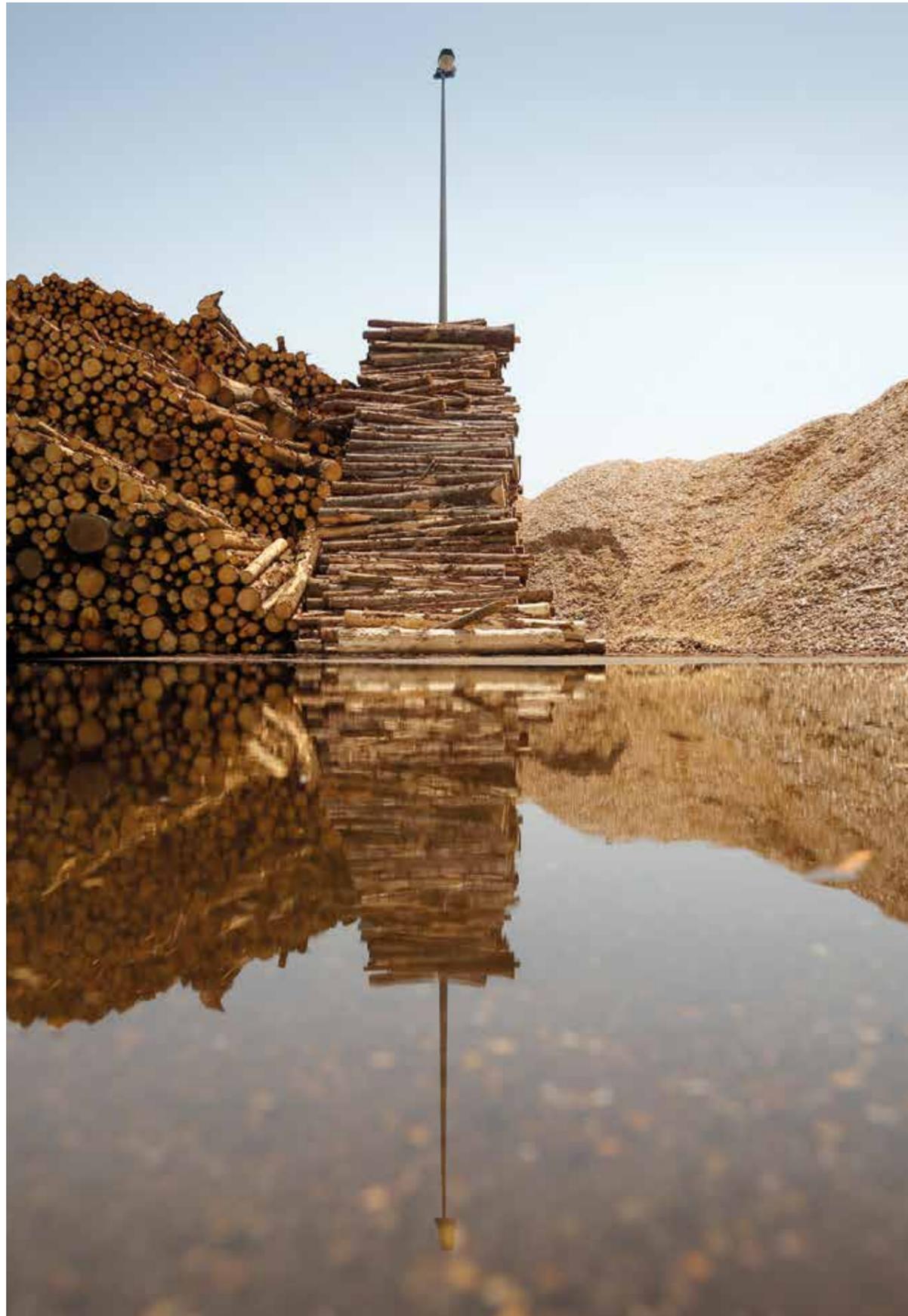
In the context of sawn timber, about 30% of the wood in a tree stem goes into making paper. Here is how the wood from a full-grown European spruce tree is typically used.



30% – Woodchips used for pulp
7% – Bark used as energy for sawmills to dry sawn timber
8% – Saw Dust used as pellets for bio-energy and panel board
55% – Sawn Timber used for furniture and construction

“One of the biggest challenges that we face as an industry, is ensuring that consumers understand where the wood needed to produce pulp and paper comes from. We use chips, and roundwood produced from thinnings which is known as pulp wood. Chips, along with saw dust, are the leftovers from the sawing of logs (about 30% of the wood volume) whose conical shape mean that the full log cannot be processed as sawn timber.”

Wiek Peters
Administrateur Délégué
SAPIN S.A.



Lanaken Mill wood stock

Our Global Use of Natural Capital



Our global business relies on natural capital, particularly on woodfibre, land and water. Accordingly, we focus closely on responsible management of these resources.

Our woodfibre resources:

EUROPE

No owned plantations or land. 40% of the wood used in Europe comes in as chips, which are a sidestream of sawmills. Woodfibre sourced from forests close to each mill. Softwood and hardwood pulp is sourced from Europe and the Americas.

Tree Species used:

Spruce (used for mechanical pulp and softwood chemical pulp)
 Beech (used for hardwood pulp)
 Lanaken Mill can also process significant amounts of poplar.

NORTH AMERICA

No owned forest plantations or land. Wood sourced from landowners and commercial loggers. Woodfibre is procured from temperate forests in Maine, New Hampshire, Michigan, Minnesota and Wisconsin and from the Canadian provinces of New Brunswick, Quebec and Ontario.

Tree Species used:

Maple, poplar, aspen, beech and birch (hardwoods)
 Spruce, Pine and fir (softwoods)

SOUTH AFRICA

Sappi owns or leases 388,000 hectares (ha) with approximately 28.6 million tons of standing timber. Contracting supply covers almost 103,000 ha.

Tree Species used:

Of the 234,000ha planted at the end of FY2016, 56% was hardwood and 44% softwood. Of contracted supply, 91% was hardwood.

High levels of forest certification

100% of our owned and leased plantations are FSC® certified.

Globally, 73% of fibre supplied to our mills is certified. Since 2009, Sappi Europe has succeeded in maintaining a minimum of 70% certified fibre share thanks to our chain of custody approach and strict certification requirements.

- All of our wood suppliers, and all of our pulp suppliers are certified, in most cases in accordance with both FSC® and PEFC™ certification schemes.
- Environmental and forestry-related information (including wood sources) is obtained from pulp suppliers on a regular basis. This data is then evaluated by a team of experts.



This publication is partly printed on paper manufactured by our Stockstadt Mill, located at Obernburger Straße 1-9, 63811 Stockstadt, Germany. Sappi Stockstadt GmbH is EMAS registered with registration number DE-103-0012.



www.twosides.info

Communicating the positives - dispelling the myths

Two Sides is a leading international organisation committed to promoting the responsible production, use and recovery of Print and Paper. Our involvement with them to produce the "Sappi Print and Paper Myths and Facts" brochure has been a great way to challenge misconceptions about paper and to set the record straight. Sappi's team of Green Ambassadors ensures that sustainability related topics remain relevant and top of mind.

www.sappi.com/how-well-do-you-know-paper

The Myth European forests are shrinking
The Fact Between 2005 and 2015, European forests grew by 44,000 Square Kilometres - that's an area bigger than Switzerland and amounts to over 1,500 football pitches everyday!

Source: FAO data, 2005-2015, Two Sides.

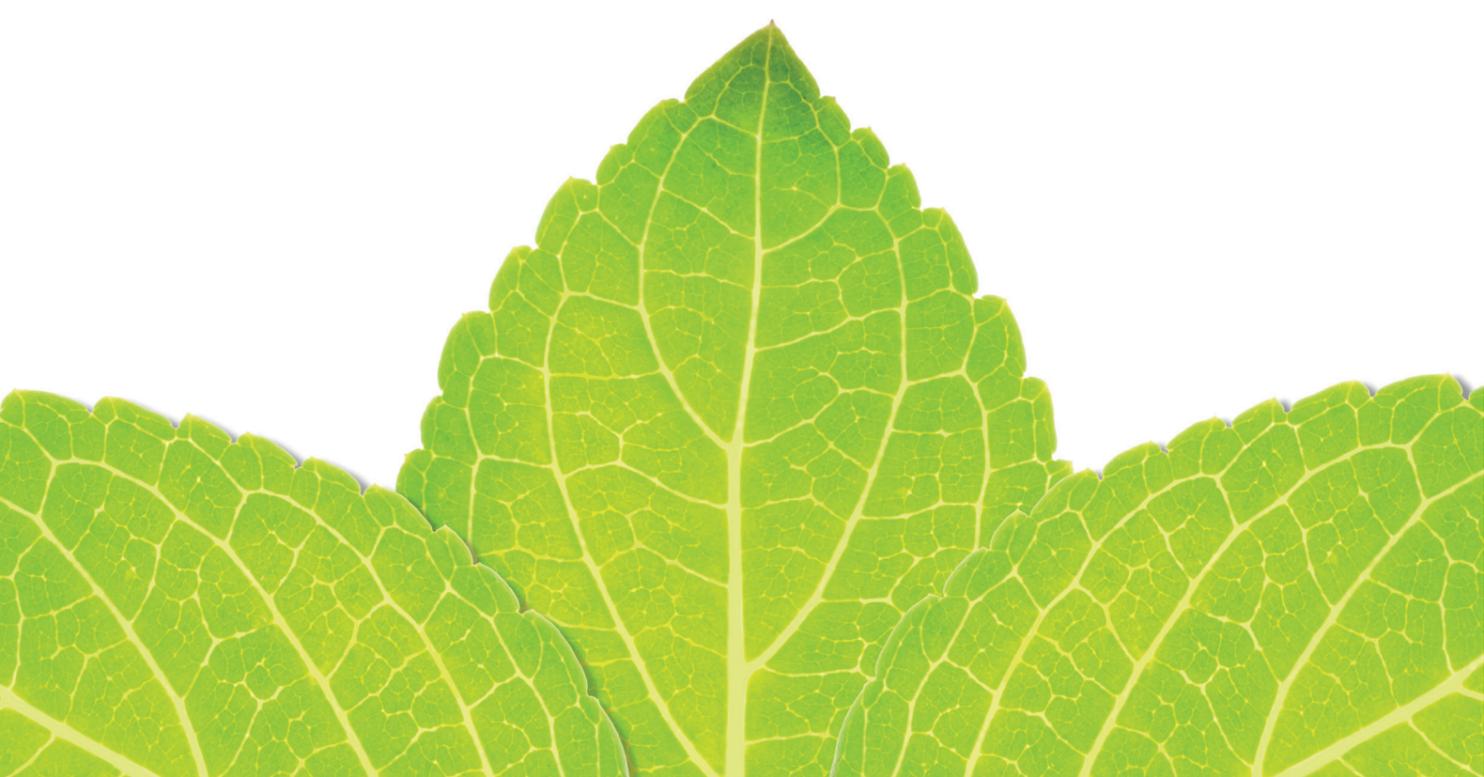
Fibre Origin of our Sustainability Report

Traceability is a priority for Sappi. We are able to determine the origin of fibre (country where the wood for the pulp was harvested) of the paper used for the printed version of this report: Magno Plus Silk (produced in Stockstadt for text weight and Maastricht for the cover). The calculation is based on the mean fibre split for the respective mills during the reporting period of his report (1st October 2016 – 30th September 2017).

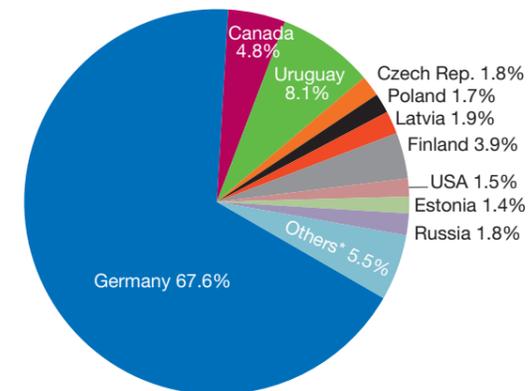


"Our industry has developed good systems to track our raw materials throughout the supply chain. We used to be the only ones active in this area, but now we see other industries taking their first steps in something that we have been doing for a long time."

Edith Henning
 Chain of Custody Coordinator
 Sappi Europe

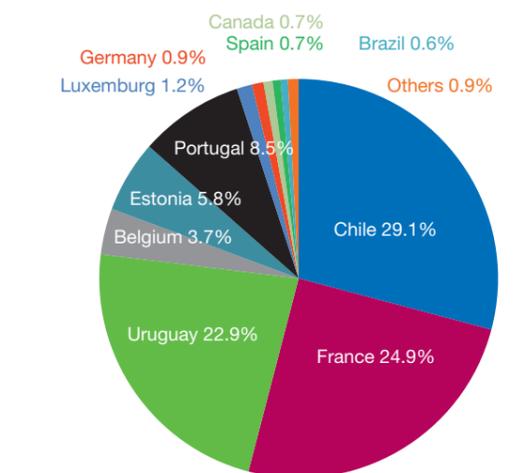


STOCKSTADT



*Others: Austria, Belgium, Brazil, CH, Denmark, France, Lithuania, Luxembourg, the Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland, UK, Ukraine

MAASTRICHT



Others: Finland, Latvia, the Netherlands, Russia, USA

Mills

Playing to our Strengths

In 2017, Sappi announced a number of projects linked to capacity expansion in Europe. The investments aim to support the company's growth strategy and 2020Vision. The focus is on being the lowest cost producer and best service provider in graphic papers and increasing the company's global product offering to packaging and speciality papers customers.

A number of projects relating to equipment upgrades and production efficiencies at Alfeld and EHINGEN Mills in Germany, Lanaken Mill in Belgium and Maastricht Mill in the Netherlands will also be undertaken during the same time frame.

The measures are to be implemented during the next three years (2017-2019).

Maastricht

SOLID BLEACHED BOARD PRODUCTION

As one of the projects, Sappi intends to start producing Solid Bleached Board (SBB) at its Maastricht facility in the Netherlands. The site currently produces graphic board and folding box board for the graphic and packaging industries. The company expects that the SBB business at the site will grow to 150,000 tonnes per annum in the next three years. Maastricht has a total capacity of 280,000 tonnes per annum which will not change with the implementation of the restructuring measures. The displaced graphic paper volumes will be assigned to other mills.

- Expanded lightweight packaging and speciality paper capacity at Alfeld Mill
- Conversion of Maastricht Mill to produce high quality solid bleached board
- Transition Lanaken Mill PM8 over three years to support coated fine paper business.



Maastricht Mill

CONTINUOUS RE-PULPING

Switching to a continuous re-pulping method has made Maastricht Mill more efficient, allowing it to keep up with increased pulp demand without buying expensive new machinery.

The mill is producing increasing amounts of packaging and speciality products such as the high-end board Algro Design. The use of continuous processing rather than batch processing has resulted in less energy consumption, and a better ability to meet demand.

Alfeld

LIGHTWEIGHT PACKAGING AND SPECIALITY PAPER

Lightweight packaging and speciality paper capacity will be expanded by 10,000 tpa (tons per annum) in Alfeld. This will result in a total capacity of 280,000 tpa. Sappi produces Solid Bleached Board (SBB) and speciality paper at the site.

Lanaken

PM8 TRANSITION

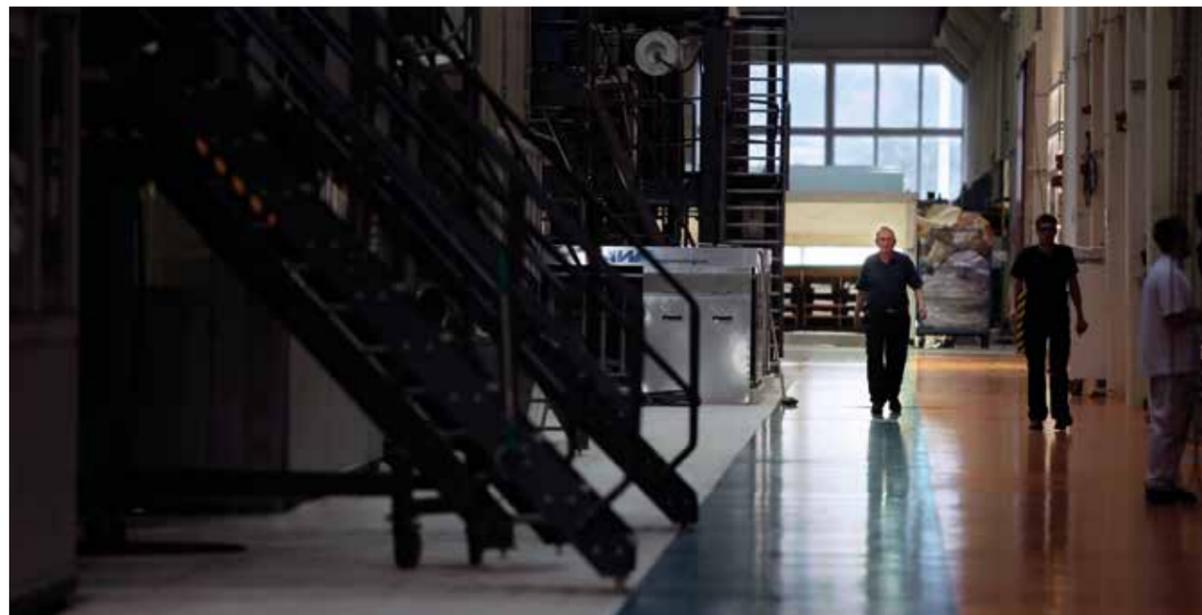
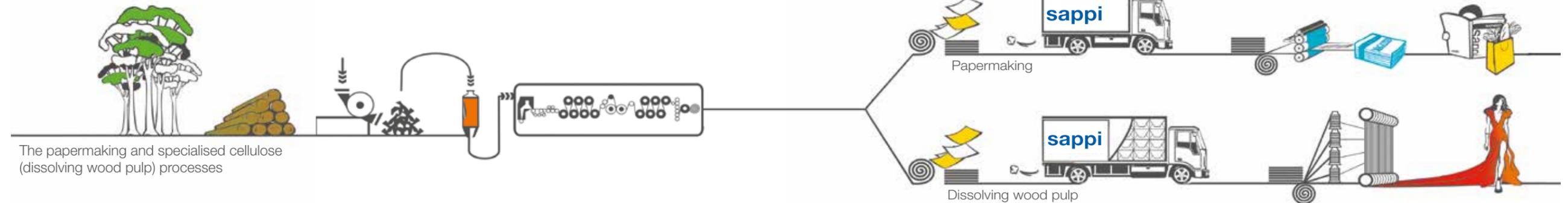
PM8 at the Lanaken site will progressively transition to lightweight and high-quality coated fine paper grades production over the next three years. At the moment, mechanical paper production accounts for 60% and coated fine paper production for 40% of total production at the site. The start-up of the rebuilt machine is scheduled for 2019.

WASTE WATER TREATMENT

As part of ongoing investments in Sappi Lanaken, the mill will get a new modern wastewater treatment plant. The paper machine rebuild scheduled for 2019 needs to be preceded by this upgrade in order to run efficiently, and deal with the increased amounts of hardwood that will be processed.

The capacity will increase three-fold and the water purification process will be improved to deal with higher loaded water. A new anaerobic reactor will result in a 280% increase in biogas production. The rebuild will start in January 2018 and is expected to be finished in October 2018.

Our Global Processes



Alfeld Mill



Lanaken Mill

Innovation in Products

Innovation is a priority throughout our printing and packaging product portfolios. Sappi offers a comprehensive range of coated and uncoated papers for food and non-food applications in the field of flexible packaging. These include speciality papers for sachets, bags and wrappers. Speciality papers that are coated on one side are ideal for the outer packaging of products requiring high-quality printing. Uncoated varieties lend themselves to inner packaging and pouches. The versatile Sappi product portfolio offers brand owners and converters the best packaging solution for each individual requirement.

Sappi has set itself the goal of launching at least two innovative products into the market each year.

Galerie Brite Plus

Although very much in demand, one of the constraints of bulky papers has been that publishers and brand owners, who wanted a high-volume publication paper, generally had to print on matt surfaces. This is no longer the case. Following intensive R&D at Kirkniemi Mill, it is now possible to combine high bulk with a glossy surface. Available in grammages of 54 to 70g/m², Galerie Brite Plus offers tangible benefits for the publications.

sappi | Galerie Brite Plus

Spraytec Coating Technology

The innovation behind the unique combination of bulk and gloss with Galerie Brite Plus revolves around the way the coating is applied. Rather than using a conventional applicator, the coating is sprayed on. Not only is less coating required, but it doesn't enter the paper as deeply, which allows for lighter calendering and a higher bulk.



Sappi Guard

Four years ago, Sappi was the world's first manufacturer to present a new speciality paper with a mineral oil barrier integrated directly in the paper, as well as including heat-sealing properties. Since then, the Sappi Guard product range has been continuously expanded with additional high-barrier paperbased solutions.

It is intended for both outer and inner packaging in the food industry, and is especially relevant for dry and fatty food such as rice, pasta, cereal and chocolate. As a result of its good heat-sealing properties, these recyclable packaging materials represent an alternative to PE (polyethylene) packaging.

sappi | Guard

Fusion Topliner

Fusion Topliner is produced from one hundred percent bleached virgin fibres. It offers visual benefits as well as considerable strength advantages. Innovation has resulted in new lower paper weights; 115 g/m² delivers weight savings while retaining very high strength values. Combined with function barriers, it can be used as food packaging.

The increased demand for Fusion Topliner has prompted Sappi to increase its production to two other mills (Ehingen and Stockstadt).

sappi | Fusion Toplayer

Parade Face Stock

The new Parade Face Stock grades are suitable for use in self-adhesive label applications such as stickers and price tags. It can be printed with offset, flexo, gravure and thermos transfer and laminated. It has excellent surface properties resulting in a brilliant appearance and excellent print results.

The Parade product line offers a comprehensive range of facestock and wet glue label papers for a variety of processing options.

sappi | Parade



Belgian Manufacturer Delafaille chose Sappi Guard for its Amusette brand of luxury chocolate bars.

They sought a solution that would improve product safety, user-friendliness and the overall aesthetic of the final product.

Algro Design

Algro Design is generally used for demanding folding box applications. In the premium packaging segment, carton grades must exhibit distinctive and relevant features that symbolise brand values and provide the end-user with a unique experience. These include the excellent whiteness and the unique surface quality of Algro Design with its outstanding finishing properties.

Sappi has expanded production of Algro Design and Algro Design Duo to its Maastricht mill.

sappi | Algro Design

sappi | Algro Design Card

sappi | Algro Design Duo

In 2017, Lanaken Mill celebrated its 50th Anniversary

1967 Lanaken Mill is founded

1968 The first paper is produced on PM7

1986 PM8 installed

1987 Lanaken Mill's pulp plant (CTMP) is set up

1997 Sappi takes over KNP Leykam and Lanaken Mill joins the group

2017 50th Anniversary Celebrations

2016 Investments for the mill announced



Transport

Putting our Paper on the Right Track

Because Sappi Europe has a large and versatile supply chain, we can cater for all our customers' demands. Whatever the terrain and whatever the country, our extensive supply chain should be able to offer a solution through our intermodal approach. Our product is transported by rail, sea and road, or a combination of these.

Our train and intermodal service has become increasingly important for our logistics teams, and all our mills have seen investment in their rail infrastructure. This has had a positive impact on our environmental footprint.

Deep-sea shipments or barges can in some cases be replaced by rail. Our Capacity Management system is able to forecast potential bottlenecks and offer alternatives to ensure that our materials get to our customers on time and in the best condition.



“One of the main tasks of Sappi Logistics Wesel is to organise the shipment of pulp and paper to and from our mills. We are well placed to do this because we are multi-modal. The pulp arrives by barge, and then we send it on by either train or road.”

Thomas Rademacher
Process Leader Logistics Development
Sappi Logistics Wesel





Getting raw materials to the mills

For most products, ensuring that the raw materials get to the mills is the responsibility of the supplier. However for some raw materials, Sappi Logistics Wesel (SLW) takes over the logistics services. In an average week, SLW has 5,500 tonnes of raw materials delivered to its mills.

Sappi's Easytrain system between Gratkorn and Wesel is a great example of the positive impact of train use

in the supply chain. It now transports raw materials such as polyvinyl alcohol, kaolin, latex and starch, as well as pulp.

Because our train runs to Gratkorn, we can offer a good price for a very regular and reliable service. As more of our suppliers have chosen this option, the train has grown into the longest mixed train (carrying different products in different types of wagon) running in (or through) Germany.

The Easytrain Initiative



Our very own light bulb moment

Replacing the 268 existing 250watt gas-light bulbs in the halls and above the docking stations of our Wesel warehouse by LED lights has led to a 75% reduction in energy consumption. This is a good example of Sappi's eco-effective approach, integrating the way we do business with our approach to the environment. It's a hands on approach to sustainability where every little change or improvement can make a difference.



“Using a train generates savings of 22,000 tonnes of CO₂. This is the equivalent to the power needed to run 3,250 homes for an entire year. The key is to ensure that the trains are as full as possible in both directions.”

Twan Bouten
Business Analyst
Sappi Logistics Wesel GmbH



Andreas Ries, Patrizia Wilczek, Robert Bayer and Norbert Kessler representing the bikers of Sappi Stockstadt

Because cycling is not only good for you, it is also good for the environment. By encouraging colleagues to cycle to work, we can make a positive impact on our carbon footprint.

If we estimate an average petrol consumption of 8l/100km, and a carbon footprint of 190g/km, the distances cycled by the “By bike to work” team have led to a reduction in CO₂ (carbon dioxide) emissions of 35.5 t CO₂ per year (217 workdays).

The “By bike to work” initiative was launched in Stockstadt Mill in 2016. During the first year, over 60 employees signed up, and cycled approximately 860 km per day. Their motivation increased as they felt the improvement in their fitness and health.

**We make sappi eco-effective.
How about you?**

Consumers

Don't Underestimate the Power of Print

In July 2016, the Sappi&You online platform went live, effectively creating a one-stop-shop for customers. Via the platform, customers can check availability, place orders and follow the status of those orders. They can also check all transactional information, view data profiles and order samples.

It has become a very effective tool, and has been adapted to suit each country. It keeps us close to our customers, and allows them to interact with us directly, working in partnership and responding to their needs in the best way possible.

But it's not all digital

External influences have forced the paper industry to adapt. But far from crumbling under the pressure, the sector is responding with strength and resilience.

Various studies confirm that print by itself commands a strong return on investment in marketing and enhances the effectiveness of campaigns if part of the media mix. It is also recognised that print's haptic and tactile properties have a very positive influence on the consumer's brain.

According to research conducted by Customer Focus and Quad/Graphics (US), 77% of people born between 1980 and 2000 pay attention to direct mail. This statistic has been reflected by retailers who continue to print promotional leaflets as a tried and trusted method to drive sales.

From catalogue to magalogue

A magalogue is a promotional catalogue designed to resemble a high-quality magazine. The theory behind their production is that customers tend to spend more time with catalogues when they start taking a magazine-like approach, with more developed content, high-end design and illustration, and lifestyle photography. Put simply, a magalogue lets customers discover new products they didn't know they wanted until presented to them.

The paper used needs to be suitable for digital printing, and the choice of bulky papers can result in a thinner and lighter catalogue with good haptic. Digital printing is also a vehicle for personalisation and mass customisation, with selected and targeted content.

The door drop is back

In a similar vein, as consumers increasingly delete 'junk emails from their inboxes, door-drop mailing has made a come-back. Again, digital printing has been one of the instigators of this trend, offering new possibilities in the field of high quality, targeted printing.

Opportunities in bulk

It's a retailer's prerogative to maximise the efficiency of its catalogue distribution by increasing page numbers and retaining paper quality without increasing distribution costs. The more pages potential customers can flick through, the greater the chance of a purchase. It's vital that the paper retains the quality tactile feel that represents the quality of the brand.

New bulkier paper grades, now including gloss options (Galerie Brite Plus), mean that these options are now available for retailers, offering more possibilities to connect with their consumers.

Supporting the move towards efficiency

Partnership and collaboration are essential in furthering our understanding of consumer demands in the printing industry. By providing support with regard to efficiency and paper consumption through analysis, we can help our customers become more eco-effective - environmentally friendly and economically clever. Our efficiency improvement workshops bring us closer to our consumers, introducing new possibilities to printers, helping them meet their demands in the best way possible.



CHAPTER 3

Meeting the Need for Renewable, Sustainable and Biodegradable Products

The Future of Packaging

Meeting the Need for Renewable, Sustainable and Biodegradable Products

Increasing numbers of brand owners have sustainability targets as part of their portfolio of requirements and are looking for alternatives to traditional packaging materials like film or aluminium. By focusing on the functionality of paper, and integrating barrier properties where necessary, doors to new markets can be opened. Working with paper to produce packaging that provides protection against moisture, oxygen, grease, aroma and mineral oils, all together or individually, is a new reality, and one that is getting a positive response.

The Future of Packaging

Sappi has been involved in the packaging market for a long time. Our innovative product line is distinguished by consistent high quality resulting from a holistic knowledge of paper production and vast experience in the packaging market. The investments that are being made in this business are based on past success in the graphic paper business, and accumulated expertise – namely the company's ability to be a cost-competitive global supplier, its expertise in coating surfaces for printing, and its reputation for innovation and quality.

Sappi Guard – Our Functional Papers Portfolio

The Sappi Guard product family has been designed to enhance the ability of packaging to protect food products and improve their safety while simultaneously removing steps from the production process.

Guard Gloss OHG is a new high-barrier paper based packaging solution that includes heat sealing properties. It provides integrated barriers that prevent the migration of oxygen, moisture, grease and mineral oil into packaged products. With this product, there is no need to apply special coatings or laminations, which makes packaging production simpler and more efficient. It provides an effective alternative to foil and plastics. More than 80% of this paper based packaging solution is comprised of renewable materials.

Awards in New Materials

Market interest in the innovative Sappi Guard high barrier paper based packaging solutions is reflective of the strong demand for sustainable alternatives in flexible packaging applications. Two recent awards have helped to spread the news even further.

The German Packaging Award 2016

Sappi's Guard family of products were awarded The German Packaging Award 2016 in the New Materials Category. The jury praised Sappi's sustainable paper packaging solutions, which offer innovative integrated barrier and heat sealing properties otherwise only achievable with multi-layer films. The jury also noted the exceptional tactile properties and excellent printability of the Sappi Guard product family.



Winner of the German Packaging Award 2016

WorldStar 2017 Awards

Sappi Guard Gloss OHG was also a winner in the food category of the WorldStar 2017 Awards. The WorldStar Competition is one of the major events conducted by the World Packaging Organisation and is the preeminent international award in the packaging industry.



Building greater expertise

During the course of 2017, Rockwell Solutions, a company specialised in barrier film technology, became a subsidiary of Sappi Europe, enhancing the packaging and speciality papers part of the business.

Rockwell Solutions has unique expertise with barrier formulations for both plastic and paper packaging. This competence will contribute to developing new innovative solutions for Sappi's mills, further meeting the need by brand owners to move to sustainable packaging solutions.



“It's a fascinating time for paper packaging. Plastic bans and food contact regulation are only some of the drivers pushing the industry to rethink its approach to packaging and functionality. Brand owners want more environmentally friendly materials to protect their products. By working with them, and helping them to define their needs, we are in a strong position to produce sustainable and fit for purpose alternatives. Watch this space.”

René Köhler
Head of Business Development
Packaging and Speciality Papers
Sappi Europe

The value of product stewardship

Regulatory and environmental pressures have generated an opportunity for paper and board based solutions to minimise traditional plastic packaging. As well as retaining functionality, high food safety and hygiene standards need to be respected.

Sappi and BASF are co-chairing an industry initiative to promote transparency across the supply chain under the umbrella of the EPCG (European Pulp and Paper Chemical Group), a working group under CEFIC (the European Chemical Industry Council). Agreeing a set of criteria based on a common set of questions is at the core of the initiative. It includes parameters such as regulatory status, food contact, eco-labels and the Paper Industry Declarable Substance List.

Our ambition level is above regulatory requirements, meeting the product safety related expectations of the most demanding customers and stakeholders.

The initiative now has many members (chemical suppliers and pulp and paper manufacturers), all keen to promote a high level of product stewardship across their interlinking industries.



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